Nathaniel Martes

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EDUCATION

B.S. in Computer Science, Wilkes University, GPA: 3.93/4.00, Honors *Expected Graduation – May 2027*

EXPERIENCE

System Administrator Intern, Wilkes University *Jun 2024 – Current*

- Automated server administration tasks using Ansible and Linux commands, saving 1 hour during software updates.
- Received mentorship from senior system administrators during on-boarding to understand server design and tools.
- Configured Python toolchains on workstations using Ansible, making it easier for students to debug programs.

DevSecOps Engineer Intern, Software Engineering Institute at Carnegie Mellon University *May 2025 – Aug 2025*

- Used Python, Git, Docker, and a REST API to create a vulnerability detector for installed software packages across all internally managed systems, cutting potential vulnerability detection time from 30 days down to 1 day.
- Corrected 4,400+ SQLite entries with Python, achieving 100% accuracy in quarterly software license usage reports.
- Built a Python and REST API tool to detect duplicate software license usage, saving 2 hours of manual data analysis.
- Integrated 80+ test cases for internal Atlassian suite applications into DevOps CI/CD pipelines using Python, Pytest, and REST APIs, preventing deployment of misconfigured Docker containers.
- Collaborated in an Agile environment using Jira to track project progress and participate in daily Stand-Up meetings, enhancing team communication and improving overall project understanding.

DevOps Engineer Intern, Wilkes University *Jun 2024 – Aug 2024*

- Deployed a 15+ page dynamic web application using Kubernetes (K3s), Docker, Wordpress, MySQL, HTML and CSS to enhance the presentation of undergraduate research.
- Architected a K3s cluster consisting of 4 Linux nodes, to simulate an AWS Elastic Kubernetes Service (EKS) development environment, integrating the Ingress service for scalable load balancing.
- Met with professor bi-weekly to discuss server and website architecture which led to optimized design choices.

Data Science Intern, Wilkes University *Jan 2024 – Apr 2024*

- Created a Spearman Correlation Matrix of methodological diversity across 77 academic professors using Tableau Python, NumPy, and SciPy, which revealed 2 out of 12 methodologies to be moderately correlated.
- Collaborated with a professor and a team of 2, holding bi-weekly meetings to gather, analyze, and document research.
- Published research which earned an 89% on the judging report at the Annual Eastern Colleges Science Conference.

PROJECTS

Multiplayer Real Time Dungeon Crawler *Feb 2025 – May 2025*

- Utilized Python, SQLite, Pygame, and FastAPI to create a full stack multiplayer dungeon crawler game.
- Designed microservice architecture which featured a REST API and Websockets for connection between players.
- Deployed CI/CD pipelines with GitLab, Docker, and Python which performed static analysis of code and ran test cases.
- Worked in an Agile environment with 2 other developers, holding bi-weekly Scrum meetings to discuss sprint plans.

J.P. Morgan Chase Affiliated Hackathon 1st Place, AI Image Disaster Analyzer *Mar 2025 – Mar 2025*

- Worked in a team of 4 to develop a full stack AI image analysis application for determining room disaster readiness using Python, Javascript, TypeScript, React, HTML, and CSS which placed 1st among 470+ competitors.
- Built a REST API using FastAPI and Google Gemini to perform server side prompting and AI parsing.
- Established Git and Docker workflows which lead to better team efficiency under limited development time.

Multithreaded Course Registrar Web Scraper *Mar 2025 – Mar 2025*

- Created a parallel web scraper to gather Wilkes University's course data using Golang, MongoDB, and Docker.
- Developed a frontend web application to display scraped results with React, Javascript, HTML, and CSS.
- Implemented a REST API to query a NoSQL database with dynamic query parameters.

LEADERSHIP

Martial Arts Instructor, Dual Dragon Karate *May 2022 – Current*

- Led hundreds of classes teaching self-defense techniques and traditional forms to 15+ students.
- Handled different student age groups from 4 years old to 50+, ensuring students are satisfied with the class and that they are learning real world skills.

SKILLS

Programming: Python, TypeScript, JavasScript, Golang, SQL
Tools: React, HTML, CSS, Git, Docker, Linux, CI/CD, Node.js, MySQL, FastAPI, Ansible, Kubernetes, Atlassian